

CLAIM LISTINGS

1-26. (cancelled)

27. (currently amended) A composite molded article comprising at least one transparent or translucent dyeable polyamide moulding compound adhered to at least one material selected from a transparent surface layer, a translucent surface layer, decorative film, functional film and rubbers, wherein said polyamide moulding compound comprises in an amount of 0.01 to 5.0 % by weight at least one lubricant comprising paraffin oil, and 2,6,10,15,19,23-hexamethyl tetracosane ~~or an isomer of 2,6,10,15,19,23-hexamethyl tetracosane.~~.

28. (cancelled)

29. (cancelled)

30. (currently amended) The material composites according to claim 27, wherein said transparent surface layers ~~and/or said other plastics~~ comprises comprise polymethyl methacrylate, polycarbonate, diethylene-glycoldiallyl carbonate (CR 39), polystyrene, polyethylene terephthalate, polybutylene terephthalate, PEN, and copolymers thereof, polyamide, copolyamide, polyether sulfone sulfone, poly(aryl) ether ketone, polyimide, polyurethane, polyacetal, polyamide imide, polyether ketone, polyether imide, polyphenylene oxide,

poly(oxymethylene), poly(xymethylene)
acetylnitrile/butadiene/styrene polymer or mixtures
thereof.

31. (currently amended) The composite molded article of claim 27, wherein said at least one lubricant is added during one of polymerisation of said polyamide moulding compound, polycondensation of said polyamide moulding compound compounding as a master batch, or applied application to the a granulate made from said polyamide moulding compound and is further used for the dispersion of coloured pigments.

32. (previously presented) The composite molded article of claim 27, wherein said transparent or translucent dyeable polyamide moulding compound comprises at least one copolymerized monomer selected from the group consisting of lactams, ω -amino acids, dicarboxylic acids, and diamines.

33. (previously presented) The composite molded article of claim 27, wherein said moulded article is manufactured by a method selected from the group consisting of injection moulding, injection compression moulding, injection blow moulding, injection stretch blow moulding extrusion and film-laminating.

34. (currently amended) The composite molded article of claim 27, further comprising in-mould labelling, in-mould decoration, in-mould film decoration, composite injection moulding, laminating, vapour coating, printing, adhesive bonding, dyeing, coating and or sealing.

35. (currently amended) The composite molded article of claim 34, wherein said composites are coated, hardcoated or dyeable hard coated ~~and further attached~~ with or without a primer-coat layer and subsequently cured.

36. (previously presented) The composite molded article of claim 34, wherein vapour coating processes are used to apply layers wherein a silicon hard coat is produced by evaporation of metals with or without a preparation by plasma treatment.

37. (currently amended) The composite molded article of claim 34, used for optical components selected from ophthalmic lenses, sun lenses, magnifier lenses, lens systems, microscopes, cameras, displays for mobile cellular telephones, camera lenses, measuring instruments, watch-glasses, watch cases, cases for portable telephone sets with or without integrated displays or CDs, DVDs, lenses for LEDs, optical waveguides, light couplers, light amplifiers, distributors, panes for lamps, and panes for

~~laser alignment tools, multi-layer films, and compound containers.~~

38. (currently amended) The composite molded article of claim 34, further comprising at least one coat selected from a colouring substance, an antireflection coating, a UV protection, a photochromic, a thermochromic, a antifogging, a water-repellent, and a scratch-proof coat.

39. (currently amended) The composite molded article of claim 27, further comprising at least one transparent plastics plastic containing lubricants joined or bonded to decorative films, functional films, hard-coat films, filter films or rubbers.

40. (currently amended) The composite molded article of claim 27, wherein said polyamide moulding compound is represented by the following chains of formula (0):
- (NH-R₁-CO)_x- (NH-R₂-NH)_y- (CO-R₃-CO)_z- formula (0),
wherein

x, y stand for up to 100 mole-% and the groups R₁, R₂, R₃ may be the same or different and consist of linearly aliphatic chains, branched chains or cycloaliphatic chains having 2 - 18 (CH₂) units; ~~chains~~, ortho, meta, para substituted aromatic nuclei rings; or ortho, meta, para dialkyl substituted aromatic nuclei rings or mixtures thereof, wherein the aromatic ring chain or

cycloaliphatic chain may be ~~mononuclear or polynuclear~~
~~and may be~~ bonded directly or indirectly or through
linear or branched alkyl groups.

41. (previously presented) The composite molded article of
claim 40, wherein said polyamide moulding compound
consist of one or more components of said polyamides of
formula (0) and one or more components of semicrystalline
polyamides, copolyamides, or block copolyamides.

42. (previously presented) The composite molded article of
claim 40, wherein said polyamide moulding compounds
further comprises one or more component of said
polyamides of formula (0) and at least one impact
strength modifier.

43. (previously presented) The composite molded article of
claim 40 wherein said polyamide moulding compound consist
of:

A. 100 mole-% of a diamine mixture of 10 - 70 mole-% of
PACM [bis-(4-aminocyclohexyl) methane] containing
less than 50 % by weight of trans,trans isomers, and
90 - 30 mole-% of MACM [bis-(4-amino-3-methyl-
cyclohexyl) methane], wherein 0 - 10 mole-% of the
diamine mixture may be substituted by other
aliphatic diamines having 6 to 12 C-atoms,
cycloaliphatic, alkyl-substituted cycloaliphatic,

branched aliphatic diamines or multiamines having 3 to 12 amino groups or mixtures thereof; and

B. 100 mole-% of long-chain aliphatic dicarboxylic acids having 8 to 14 C-atoms or mixtures of these dicarboxylic acids, wherein 0 - 100 mole-% of these dicarboxylic acids may be substituted by other aromatic or cycloaliphatic dicarboxylic acids having 8 to 16 C-atoms selected from the group consisting of isophthalic acid, terephthalic acid, naphthaline dicarboxylic acid, cyclohexane dicarboxylic acid or mixtures thereof, further comprising up to 20 mole-% of ω - amino acids having 6 to 12 C-atoms or lactams having 6 to 12 C-atoms.

44. (previously presented) The composite molded article of claim 43, wherein said polyamide moulding compound consist of:

A. 100 mole-% of a diamine mixture of 30 - 70 mole-% of PACM [bis-(4-aminocyclohexyl) methane] containing less than 50 % by weight of trans,trans isomers, and 70 - 30 mole-% of MACM [bis-(4-amino-3-methyl-cyclohexyl) methane]; and

B. 100 mole-% of dodecanedioic acid (DDA) or sebacic acid (SA) or azelaic acid (AA) or mixtures thereof.

45. (previously presented) The composite molded article of
claim 44, wherein said polyamide moulding compound
consist of:

- A. 100 mole-% of a diamine mixture of 40 - 70 mole-% of PACM [bis-(4-aminocyclohexyl) methane] containing less than 50 % by weight of trans,trans isomers, and 60 - 30 mole-% of MACM [bis-(4-amino-3-methylcyclohexyl) methane]; and
- B. 100 mole-% of dodecanedioic acid.

46. (previously presented) The composite molded article of
claim 45, wherein said polyamide moulding compound
consist of:

- A. 100 mole-% of a diamine mixture of 50 - 70 mole-% of PACM [bis-(4-aminocyclohexyl) methane] containing less than 50 % by weight of trans,trans isomers, and 50 - 30 mole-% of MACM [bis-(4-amino-3-methylcyclohexyl) methane]; and
- B. 100 mole-% of dodecanedioic acid.

47. (withdrawn-previously presented) The composite molded
article of claim 27, wherein said polyamide moulding
compound comprise copolyamides which particularly have a
refractive index n_d^{20} over 1.59, which have a predominant
weight percentage of diamines and aromatic dicarboxylic

acids characterised by the following chains represented
by formula (A):

-{IPA-NH-R₁-NH}_{n₁}-{TPA-NH-R₂-NH}_{n₂}-{CO-R₃-NH}_{n₃}- (A),

where

n₁ = 40 to 100 % by weight,

n₂ = 60 to 0 % by weight,

n₃ = 0 to 30 % by weight and wherein the weight
percentages of n₁, n₂ and n₃ balance to 100 % by weight,
wherein the diamines wherein R₁, R₂ may be the same or
different and consist of paraxylylene or meta-xylylene
units in an amount of at least 30 mole-% related to 100
mole-% of diamine and consist of linearly aliphatic or
branched cycloaliphatic chains having 2 to 12 (CH₂) units
or of chains which are used alone or as mixtures and
wherein 100 mole-% of said dicarboxylic acids consist of
at least 40 mole-% of isophthalic acid (IPA) and of
terephthalic acid (TPA) in an amount to balance 100 mole-%,
wherein TPA may completely or partially be substituted
by naphthaline dicarboxylic acids, wherein up to 30 % by
weight of said copolyamides of said moulding compounds
may be substituted by amino acids or lactams having an R₃
nucleus, consisting of 5 to 11 (CH₂) chains.

48. (withdrawn-Previously presented) The composite molded article of claim 47, wherein said copolyamides comprise the composition of formula (B):

MXDI/MXDT/6I/6T (B),

where

the respective components have the following mole percentages:

meta-xylylene diamine (MXD): 20 to 100 mole-%,
hexamethylene diamine (6): 80 to 0 mole-%,
isophthalic acid (I): 50 to 100 mole-%, and
terephthalic acid (T): 50 to 100 mole-%,
each related to 100 mole-% of diamine and 100 mole-% of dicarboxylic acids, wherein meta-xylylene diamine may completely or partially be substituted by para-xylylene diamine and wherein terephthalic acid may completely or partially be substituted by naphthaline dicarboxylic acid, wherein symmetric or preferably asymmetric isomers or mixtures thereof may be used.

49. (withdrawn-Previously presented) The composite molded article of claim 48, wherein said copolyamides comprise the composition of formula (B):

MXDI/MXDT/6I/6T

(B),

where

the respective components have the following mole percentages:

meta-xylylene diamine (MXD): 20 to 80 mole-%,
hexamethylene diamine (6): 80 to 20 mole-%,
isophthalic acid (I): 60 to 80 mole-%, and
terephthalic acid (T): 40 to 20 mole-%,
each related to 100 mole-% of diamine and 100 mole-% of dicarboxylic acids.

50. (withdrawn-previously presented) The composite molded article of claim 48, wherein said copolyamides comprise the composition of formula (C):

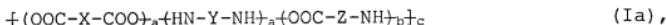
6I/6T/6NDC (C),

where

the respective components have the following mole percentages:
naphthaline dicarboxylic acid (NDC) having a symmetric or asymmetric substituent position, or mixtures thereof, particularly 2,6-naphthaline carboxylic acid: 20 to 80 mole-%,
isophthalic acid (I): 80 to 20 mole-%,
terephthalic acid (T): 40 to 0 mole-%, and hexamethylene diamine (6): 100 mole-%, which hexamethylene diamine may completely or partially be substituted by ethylene diamine, trimethyl hexamethylene

diamine, or linear diamines having 8 to 12 CH₂-groups, or cycloaliphatic diamines such as norbornane diamine, 4,4-diaminodicyclohexyl methane, 3,3`-dimethyl-4,4`-diaminodicyclohexyl methane or mixtures thereof, each related to 100 mole-% of diamine and 100 mole-% of dicarboxylic acids.

51. (withdrawn-Previously presented) The composite molded article of claim 27, wherein said polyamide moulding compound is a polyamide blend consisting of a polyamide having the composition of formula (I); and at least one semicrystalline polyamide having the composition of formula (II), wherein the components of said polyamide (I) and said polyamide (II) are used in a ratio of 99 : 1 to 1 : 99, preferably 10 : 90 to 90 : 10, so that the sum equals 100 parts, wherein said polyamide (I) has the following monomer composition or is represented by chains of the following formulas (Ia) or (Ib):



where

X = iso-phenylene, para-phenylene, 4 - 12 (CH₂) units, cyclohexyl, naphthyl, norbornyl, norbornane dimethyl, trimethyl hexamethylene,

X_1 = iso-phenylene, para-phenylene - 12 (CH₂) units,
cyclohexyl, naphthyl, norbornyl, norbornane
dimethyl, trimethyl hexamethylene,

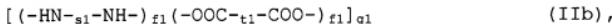
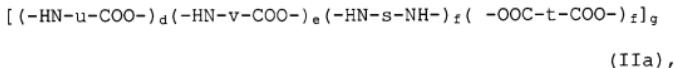
Y = (CH₂): 2 - 12 (CH₂) units, cyclohexyl, bis-(methyl-
cyclohexyl) methane, bis-(methylcyclohexyl) ethane,
bis-(methyl-cyclohexyl) propane, norbornyl,
norbornane dimethyl, trimethyl hexamethylene, bis-
(cyclohexyl) methane, bis-(cyclohexyl) ethane, bis-
(cyclohexyl) propane,

Y_1 = (CH₂): 2 - 12 (CH₂) units, cyclohexyl, bis-(methyl-
cyclohexyl) methane, bis-(methylcyclohexyl) ethane,
bis-(methyl-cyclohexyl) propane, norbornyl,
norbornane dimethyl, trimethyl hexamethylene, bis-(
cyclohexyl) methane, bis-(cyclohexyl) ethane, bis-
(cyclohexyl) propane,

Z = (CH₂): 4 - 12 (CH₂) units, cyclohexyl, bis-(methyl-
cyclohexyl) methane, bis-(methylcyclohexyl) ethane,
bis-(methyl-cyclohexyl) propane, norbornyl,
norbornyl dimethyl,

Z_1 = (CH₂): 4 - 12 (CH₂) units, cyclohexyl, bis-(methyl-
cyclohexyl) methane, bis-(methyl-cyclohexyl) ethane,
bis-(methyl-cyclohexyl) propane, norbornyl,
norbornyl dimethyl, trimethyl hexamethylene, and

a = 0 - 50 mole-%, b = 0 - 100 mole-%, a₁ = 0 - 50 mole-%, b₁ = 0 - 100 mole-%, and the sum of a + a₁ + b + b₁ is 100 mole-% and the sum of c + c₁ is 100 % by weight; and wherein said semicrystalline polyamide (II) is represented by chains of formula (IIa) and/or (IIb):



where

u = (CH₂): 4 - 12 (CH₂) units, v = (CH₂): 4 - 12 (CH₂) units,

s, s₁ = (CH₂): 2 - 12 (CH₂) units, meta-xylylene, para-xylylene,

t, t₁ = (CH₂): 2 - 12 (CH₂) units, iso-phenylene, para-phenylene, and

f = 0 - 50 mole-%, d = 0 - 100 mole-%,

f₁ = 0 - 50 mole-%, e = 0 - 100 mole-%,

wherein the sum of f + f₁ + d + e is 100 mole-% and the sum of g + g₁ is 100 % by weight; and

at least 0.01 to 2.0 parts by weight of a phosphorus compound of formula (III), related to 100 parts by weight of said polyamides of formulas (Ia)/(Ib), (IIa)/(IIb), which may be used in a pure form or as an aqueous solution:

$[X(R')_n P(O)_1 (OR'')_m]$ (III),

where

X = H, -OR'', 2-pyridyl, -NH₂, -NHR', -NR'R'', wherein X may be bonded to (R') or may be directly bonded to P,
R' = (CH₂)_{n1}, linear or branched,
R'' = Li, Na, K, H, (CH₂)_{n2}, linear or branched, and
n = integer of 0 to 5; l = 0, 1, 1.5, 2, 2.5; m = integer of 0 to 3; n₁ = integer of 1 to 12, n₂ = 1 to 12; and/or 0.01 to 15 parts by weight of cyclic phosphonic acid anhydride compounds of formula (IV), related to 100 parts by weight of said polyamides of formulas (Ia)/(Ib), (IIa)/(IIb), which may be used in a pure form or as an aqueous solution:

$[-(R)PO(O)-]^n$ (IV),

where

n = 3, 4, 5, 6, an alternating -P-O- heterocycle having 3, 4, 5, 6 (P-O) units in the ring,
R = CH₃, C₂H₅, C₃H₇, C₄H₉, isobutyl, 2,2,6,6-tetramethyl-4-piperidyl.

52. (withdrawn-Previously presented) The composite molded article of claim 51, containing 10 to 90 % by weight of a polyamide (I) and 90 to 10 % by weight of a semicrystalline polyamide (II).

53. (previously presented) The composite molded article of
claim 27 comprising 0.01 to 2.0 % by weight of said
lubricant.

54. (cancelled)

55. (previously presented) The composite molded article of
claim 36 wherein said vapour coating processes comprises
sputtering.

56. (previously presented) The composite molded article of
claim 39 wherein said functional films are selected from
polarizing sheets.

57. (currently amended) The composite molded article of claim
42 wherein said impact strength modifiers are selected
from grafted sheath/core polymers, and impact strength
modifiers, thermotropic additives, thermochromic
additives glass fibres, glass balls, or antidamping
agents.

58. (previously presented) The composite molded article of
claim 57 wherein said impact strength modifiers are
selected from the group consisting of SBR, SBS, EPS, EPR,
SEBS, EMP, EPDM, maleic anhydride, grafted polyethylenes,
propylene and terpolymers of ethylene-glycidyl
methacrylate.